

CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given, for the various sections of the Climatological Service of the Weather Bureau, the average temperature and rainfall, the stations reporting the highest and lowest temperatures with dates of occurrence, the stations reporting the greatest and least monthly precipitation, and other data, as indicated by the several headings.

The mean temperatures for each section, the highest and

Temperature and precipitation by sections, October, 1909.

lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperature and precipitation are based only on records from stations that have ten or more years of observations. Of course the number of such records is smaller than the total number of stations.

Section.	Temperature—in degrees Fahrenheit.							Precipitation—in inches and hundredths.						
	Section average.	Departure from the normal.	Monthly extremes.			Station.	Lowest.	Date.	Section average.	Departure from the normal.	Greatest monthly.		Least monthly.	
			Station.	Highest.	Date.						Station.	Amount.	Station.	Amount.
Alabama	63.9	0.0	Evergreen	96	5	3 stations	25	25	1.59	- 0.86	Bridgeport	4.90	Ozark	0.20
Arizona	63.8	+ 0.1	4 stations	110	4 d't's	Flagstaff. (3)	6	31	0.01	- 0.61	Douglas	0.11	59 stations	0.00
Arkansas	63.0	+ 1.1	Bee Branch	98	5	Pond	24	12	2.15	- 0.21	Mount Nebo	4.84	Alicia	0.00
California	60.2	- 0.3	Escondido	104	24	Tamarack	11	29	1.66	- 0.24	Monumental	15.70	20 stations	0.00
Colorado	47.8	+ 1.4	Holly	95	2	Breckenridge	2	9	0.78	- 0.43	Cumbres	2.37	Hartsel	0.01
Florida	71.6	- 0.5	De Funik Springs	96	5	Mount Pleasant	34	25	1.93	- 2.03	Miami	21.08	6 stations	0.00
Georgia	63.1	- 0.9	Bainbridge	93	5	Clayton	24	23	1.53	- 1.03	Lafayette	4.17	Hawkinsville	0.04
Hawaii	72.3	.	Waianae, Oahu	91	3	Humula, Hawaii	39	2, 28	4.38	.	Honolulu Valley	13.88	Puuloa, Oahu	0.40
Idaho	47.7	+ 1.2	Stone	87	2	Blackfoot Dam	5	8, 31	1.00	- 0.15	Landore	2.78	2 stations	0.11
Illinois	51.4	- 3.0	Equality	94	3	Lanark	13	28	2.59	- 0.35	Whitehall	5.48	Antioch	0.61
Indiana	50.4	- 4.3	Mount Vernon	90	3	Judyville	19	13	3.72	+ 1.48	Richmond	5.77	Laporte	1.40
Iowa	49.7	- 2.3	Bloomfield	97	2	Washta	10	13	2.22	- 0.13	Cumberland	4.70	Independence	0.48
Kansas	57.1	0.0	4 stations	96	3 d't's	Norton	14	12	1.81	- 0.25	Norwich	3.87	Scott	0.53
Kentucky	55.1	- 2.3	Hopkinsville	94	7	Farmers	18	29	2.10	+ 0.01	Louisville	4.08	Alpha	0.95
Louisiana	65.5	+ 1.8	Schriever	93	5	Robeline	31	25	2.09	- 0.54	Grand Cane	4.10	Burrwood	0.10
Maryland and Delaware	52.3	- 3.5	Cambridge, Md.	86	8	Laurel, Md.	19	30	1.58	- 1.55	Frostburg, Md.	4.07	Great Falls, Md.	0.51
Michigan	45.3	- 2.9	Gladwin	87	9	Blaney	12	20	1.60	- 1.14	Ironwood	4.66	Reed City	0.37
Minnesota	44.7	- 1.5	4 stations	89	5, 6	Milaca	7	28	1.58	- 0.82	International Falls	5.49	Pipestone	0.40
Mississippi	65.0	+ 0.7	Hattiesburg	96	4, 5	Lake	28	25	1.32	- 0.95	Pascagoula	8.17	Shoecoe	0.00
Missouri	57.2	- 0.4	3 stations	96	3, 4	Louisiana	20	13	2.77	+ 0.43	Louisiana	6.69	Perryville	C.10
Montana	45.2	+ 0.7	Glendive	89	1	Fallon	2	12	0.60	- 0.43	Snowshoe	5.27	5 stations	0.00
Nebraska	51.4	+ 0.2	Beaver City	101	2	Gordon	0	12	1.15	- 0.49	Hooper	4.02	3 stations	T.
Nevada	50.4	+ 1.2	Logan	91	23	Cobre	7	23	0.61	+ 0.06	Mount Rose Ranch	3.80	3 stations	0.00
New England*	48.6	- 0.5	St. Johnsbury, Vt.	92	10	Bloomfield, Vt.	13	31	1.60	- 2.16	Jacksonville, Vt.	4.85	Chelsea, Vt.	0.41
New Jersey	51.2	- 3.3	Flemington	84	9	Charlotteburg	18	20	1.18	- 2.62	Atlantic City	1.82	Elizabeth	0.40
New Mexico	64.1	+ 0.4	Carlsbad	93	16	Elizabethtown	-5	9	0.81	- 0.30	Campana	3.09	6 stations	0.00
New York	46.7	- 3.1	4 stations	85	10	Nehasane	10	30	1.83	- 1.52	Adams Center	5.87	Ballston Lake	0.41
North Carolina	57.0	- 2.7	3 stations	87	4 d't's	Banners Elk	17	25	1.88	- 1.61	Hatteras	4.97	Murphy	0.41
North Dakota	43.1	- 0.9	Forman	87	7	Crosby	0	13	0.64	- 0.28	Power	1.98	2 stations	T.
Ohio	48.8	- 4.5	Amesville	86	9, 10	Bladensburg	16	29	2.31	+ 0.10	Jacksonburg	5.25	Youngstown	0.62
Oklahoma	62.0	+ 0.1	Hartshorne	90	1	Fairland	24	12	2.19	- 0.20	Dacoma	5.05	Blackburn	0.73
Oregon	52.1	+ 0.3	Hood River	96	9	Weston	11	17	3.23	- 0.41	Happy Home	13.99	Bear Valley	0.06
Pennsylvania	48.4	- 3.5	Irwin	87	10	Lawrenceville	15	30	2.27	- 0.80	Hamburg	4.60	Milford	0.70
Porto Rico	78.9	+ 0.4	Arecibo	100	25	San Salvador	53	15	7.81	- 0.12	Las Marias	16.47	Culebra	3.05
South Carolina	61.2	- 2.0	Florence	98	10	Liberty	27	25	2.43	- 0.55	Effingham	4.74	Jacksonboro	T.
South Dakota	48.1	- 0.3	Armour	95	5	Bowdile	7	13	1.28	- 0.01	La Delle	3.24	Ashcroft	T.
Tennessee	58.0	- 1.4	Jackson	94	4†	Rugby	16	25	2.21	- 0.41	Benton	4.50	Brownsville	0.95
Texas	68.4	+ 0.9	Fairland	105	14	Nazareth	22	12	2.47	- 0.16	Columbia	16.75	Eagle Pass	0.00
Utah	50.8	+ 2.2	Garrison	91	5	Scipio	6	31	0.42	- 0.56	Silver Lake	2.17	17 stations	0.00
Virginia	53.2	- 3.1	Lincoln	88	8	Burken Garden	14	29	1.87	- 1.27	Hot Springs	3.56	Columbia	0.74
Washington	50.3	0.0	Baker	87	4	Northport	14	17	2.60	+ 0.08	Quinault	13.78	North Yakima	0.32
West Virginia	50.0	- 4.3	3 stations	88	9, 10	Marlinton	14	29	2.79	+ 0.38	Buckhannon	5.27	Elkhorn	0.60
Wisconsin	45.0	- 3.0	Merrill	86	8	Solon Springs	9	28	1.38	- 1.22	Iron River	4.18	Cecil	0.32
Wyoming	43.7	+ 1.4	Moorcroft	85	2	Eden	4	31	0.41	- 0.48	Sylvan Pass, Y. N. P	1.67	4 stations	0.00

*Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut.

†Other dates also.

TABLE I.—Climatological data for U. S. Weather Bureau stations, October, 1909.

Stations.	Elevation of instruments.		Pressure, in inches.		Temperature of the air, in degrees Fahrenheit.						Precipitation, in inches.		Wind.															
	Barometer above sea level, feet.	Thermometers above ground.	Aneroid above ground.	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hrs.	Departure from normal.	Mean max. + 2.	Departure from normal.	Maximum.	Date.	Mean minimum.	Date.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Total.	Departure from normal.	Days with 0.1 or more.	Total movement, miles.	Prevailing direction.	Maximum velocity.	Clear days.	Cloudy days.	Average cloudiness during daylight, tenths.	Total snowfall.		
New England.																												
Eastport.	76	67	85	29.82	29.90	- .10	49.9	- 0.5	78	9 55	28	31 43	24	45	42	73	1.70	- 1.9	9	7,571	w.	36	se.	22	7 10 14	5.3	0.2	
Greenville.	1,070	6	23.75	29.96	- .06	44.2		77	9 52	18	31 36	39	40	73	1.50	- 2.2	10	6,337	w.	34	nw.	25	11 10 16	15	5.0			
Portland, Me.	103	81	117	29.86	29.98	- .06	49.6	+ 0.5	81	9 57	29	31 42	28	44	40	73	0.82	- 2.4	8	3,957	w.	25	nw.	29	7 15 5	15	5.7	
Concord.	283	70	79	29.68	30.00	- .05	47.5	- 1.2	83	9 58	22	31 21	37	41			1.13	- 2.0	8	7,649	s.	38	s.	14	9 6 16	6.3	T.	
Burlington.	404	11	43	29.56	30.00	- .04	46.2	- 0.7	81	10 54	24	30 38	35	42	40	73	1.5	- 1.4	15	5,576	nw.	31	nw.	29	7 17 7	17	6.3	
Northfield.	876	16	29	29.06	30.03	- .01	43.2	- 0.4	80	10 53	20	30 33	43	39	36	82	1.11	- 2.3	15	5,576	w.	30	w.	17	12 12 7	4.4	T.	
Boston.	125	115	188	29.87	30.01	- .04	52.8	+ 0.6	77	9 60	33	30 45	24	46	40	67	1.07	- 2.3	7	7,414	w.	30	w.	15	10 13 8	8.4	T.	
Nantucket.	12	14	20	29.99	30.00	- .05	53.8	- 0.7	76	10 59	36	30 49	49	20	44	76	4.40	+ 1.0	11	10,305	w.	46	ne.	15	10 13 8	8.4	T.	
Block Island.	26	11	46	30.00	30.02	- .03	53.7	- 1.6	75	10 58	34	29 49	16	48	44	72	1.74	- 2.4	15	5,269	sw.	50	nw.	29	15 3 13	4.8	T.	
Narragansett.	9						49.6	- 2.5	81	10 62	18	30 37	36				2.03		7		w.				20 6 5			
Providence.	160	141	165	29.82	30.02	- .03	51.2	- 1.0	80	10 60	29	30 42	42	39	39	70	1.25	- 2.6	8	7,169	nw.	40	nw.	17	12 17 2	4.3	T.	
Hartford.	159	122	140	29.86	30.03	- .03	51.0	- 0.2	82	10 61	28	21 41	34	44	38	67	1.40	- 2.5	8	5,144	nw.	27	sw.	14	11 9 11	5.7	T.	
New Haven.	106	116	155	29.92	30.03	- .03	51.6	- 1.2	78	10 60	31	20 43	29	45	39	68	1.76	- 2.3	9	6,362	w.	30	nw.	29	14 8 9	9.4	4.2	
Md. Atlantic States.							52.8	- 3.0																				
Albany.	97,102	115	29.94	30.05	- .01	49.5	- 0.9	79	10 58	28	21 40	31	43	39	75	0.83	- 2.2	10	4,983	nw.	28	s.	14	9 9 13	6.0	T.		
Binghamton.	871	78	29.12	30.07	+ .01	46.4	- 2.8	80	9 55	25	30 38	37	43			1.53	- 1.6	13	4,068	w.	26	se.	11	9 5 17	6.5	T.		
New York.	314	108	350	29.71	30.05	- .01	53.2	- 2.4	75	8 60	35	30 47	24	46	41	67	0.74	- 3.0	8	9,396	w.	46	nw.	29	15 8 15	8.3	4.3	
Harrisburg.	374	94	104	29.70	30.11	+ .03	50.8	- 3.2	79	8 59	36	20 42	38	44	39	72	2.37	- 0.6	6	4,754	nw.	28	nw.	22	16 7 8	4.4	T.	
Philadelphia.	117	116	184	29.97	30.10	+ .03	55.0	- 1.6	78	7 63	36	30 48	31	47	41	65	0.83	- 2.3	8	7,054	nw.	28	nw.	29	18 6 9	9.3	T.	
Scranton.	805	111	119	29.21	30.08	+ .01	48.3	- 3.2	82	9 57	28	30 40	36	42	37	70	1.86	- 1.0	9	5,231	sw.	27	se.	11	11 8 14	6.0	T.	
Atlantic City.	52	37	48	30.04	30.09	+ .02	53.2	- 4.2	76	7 61	30	35 45	26	48	43	71	1.82	- 1.5	10	5,622	nw.	29	sw.	14	7 8 14	6.0	T.	
Cape May.	17	43	50	30.10	30.11	+ .04	55.6	- 4.0	74	7 63	34	20 48	24	49	44	71	1.61	- 1.7	8	6,627	nw.	30	sw.	14	12 5 12	5.9	T.	
Baltimore.	123	100	113	29.97	30.10	+ .02	54.8	- 2.7	80	8 64	35	20 46	37	47	40	63	1.03	- 2.0	5	4,940	sw.	30	se.	11	11 5 15	8.4	T.	
Washington.	112	62	85	29.99	30.11	+ .03	53.2	- 3.4	80	8 64	31	30 42	42	45	40	70	0.79	- 2.3	5	4,469	nw.	27	nw.	29	18 7 8	6.0	T.	
Cape Henry.	18	9	58	30.09	30.11	+ .04	55.4	- 3.7	79	18 66	41	14 51	32				1.03	- 2.8	5	10,265	nw.	39	nw.	28	21 4 12	6.0	T.	
Lynchburg.	681	83	88	29.39	30.14	+ .05	53.9	- 3.0	81	18 67	30	26 41	42	48	41	71	1.46	- 1.9	6	2,758	nw.	22	nw.	24	15 12 12	4.4	T.	
Mount Weather.	1,725	60	64	28.26	30.10	+ .01	49.3	- 2.3	72	8 57	29	25 45	42	36	37	70	1.90	- 0.5	5	10,466	nw.	44	nw.	24	15 12 12	4.3	T.	
Norfolk.	91	102	111	30.03	30.13	+ .06	55.4	- 2.9	79	23 67	40	26 50	31	51	45	67	0.77	- 2.6	5	5,031	sw.	37	nw.	23	13 16 2	2.6	T.	
Richmond.	144	145	153	29.98	30.14	+ .06	55.4	- 4.4	79	22 66	33	20 45	35				0.77	- 0.1	4	3,940	w.	27	w.	16	16 7 8	3.5	T.	
Wytheville.	2,293	40	47	27.73	30.14	+ .05	50.0	- 3.6	74	9 61	24	29 39	39	43	40	78	3.06	- 0.1	4	3,940	w.	16	w.	16	7 8 3.5	3.5	T.	
S. Atlantic States.							61.9	- 1.7									72	1.87	- 2.2									
Asheville.	2,255	53	75	27.80	30.18	+ .09	52.8	- 2.5	77	18 66	25	25 40	42	45	41	75	3.28	+ 0.3	5	4,937	nw.	33	nw.	23	22 5 5	4.2	T.	
Charlotte.	773	68	78	29.31	30.16	+ .08	58.8	- 2.3	80	10 69	33	25 48	32	50	44	66	1.37	- 1.8	5	4,776	sw.	28	sw.	23	15 5 4	4.2	T.	
Hatteras.	11	12	47	30.11	30.12	+ .06	63.1	- 2.9	79	11 69	45	29 57	57	57	53	74	0.97	- 5.0	3	10,631	ne.	45	sw.	15	24 2 2 1	2.1	T.	
Manteo.	12	12	46				60.1		78	11 69	45	35 50	51				0.97	- 5.0	3									
Raleigh.	376	103	110	29.73	30.14	+ .07	58.4	- 2.1	80	23 69	34	20 47	41	49	42	63	1.52	- 2.0	5	5,339	ne.	34	nw.	23	19 8 4	2.6	T.	
Wilmington.	78	81	91	30.06	30.14	+ .08	61.2	- 2.1	79	22 72	35	25 51	54	54	49	73	1.67	- 2.1	3	5,213	ne.	38	nw.	15	20 10 1	2.5	T.	
Charleston.	43	14	92	30.08	30.13	+ .07	65.4	- 1.7	81	11 73	43	25 58	58	60	57	81	2.00	- 1.9	7	6,730	e.	28	e.	19	21 9 1	2.5	T.	
Columbia, S. C.	351	41	57	29.75	30.14	+ .07	61.3	- 2.7	84	4 73	35	25 50	52	46	46	65	3.43	+ 0.6	4	4,553	ne.	30	sw.	23	21 5 5	2.1	T.	
Augusta.	180	89	97	29.84	30.13	+ .06	61.8	- 1.8	87	4 74	36	25 50	53	54	49	74	2.73	+ 0.4	4	3,742	nw.	30	nw.	23	18 3 5	2.4	T.	
Savannah.	65	81	89	30.07	30.14	+ .09	66.4	+ 0.1	83	11 75	40	25 58	58	54	54	74	0.93	- 2.6	5	8,278	e.	26	nw.	15	21 7 3	5.7	T.	
Jacksonville.	43	96	129	30.06	30.11	+ .09	75.5	- 0.5									77	7.63	+ 1.7									
Florida Peninsula.							65.0	+ 4.4									77	7.63	+ 1.7									
Jupiter.	28	10	46	30.00	30.03	+ .07	76.6	- 0.2	87	1 81	64	13 72	70	67	74	74	5.57	- 3.9	13	11,764	e.	36	e.	11	16 13 6	6.5	T.	
Key West.	22	10	53	29.94	29.96	+ .02	77.4	- 1.3	88	1 82	71	25	73	12	73	72	83	10.87	+ 11.5	18	9,590	e.	33	ne.	11	9 8 14	6.4	T.
Sand Key.																												

MONTHLY WEATHER REVIEW.

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TABLE I.—Climatological data for U. S. Weather Bureau stations, October, 1909—Continued.

Stations.	Elevation of instruments.		Pressure, in inches.				Temperature of the air, in degrees Fahrenheit.						Precipitation, in inches.			Wind.									
	Barometer above sea level, feet.	Thermometers above ground.	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hrs.	Departure from normal.	Mean max. + 2 mean min. - 2	Maximum.	Departure from normal.	Date.	Mean maximum.	Minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Total.	Departure from normal.	Days with 0°, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity.	Clear days.			
	Anemometer above ground.																	Miles per hour.	Direction.	Date.	Cloudy days.	Average cloudiness during daylight, tenths.	Total snowfall.		
<i>Upper Lake Region.</i>																									
Alpena.	602	13	92	29.36	30.04	+ .01	43.8	- 2.3	73	6 52	23	29	35	39	36	82	0.79	- 2.6	10	8,255	nw.	40	sw.	12 10 7 14 6 8.2 T.	
Escanaba.	612	40	82	29.35	30.02	+ .01	43.6	- 1.5	66	9 50	29	19	37	26	40	37	79	1.40	- 1.7	11	7,515	s.	36	nw.	14 5 10 16 6 5 0.1
Grand Haven.	632	54	92	29.37	30.06	+ .03	46.6	- 3.6	78	9 55	26	29	39	31	42	38	77	1.57	- 0.9	6	10,109	w.	46	sw.	12 8 6 15 6 8.2 0.2
Grand Rapids.	707	127	103	29.30	30.08	+ .04	47.2	- 2.9	79	9 56	29	29	39	31	42	37	73	1.14	- 1.4	7	8,258	w.	42	sw.	11 6 15 8 17 6.9 4.7
Houghton.	663	68	74	29.24	29.97	- .03	45.2	+ 0.1	85	7 52	27	28	39	35	40	36	73	2.83	- 0.4	10	5,271	nw.	35	n.	11 6 8 17 6.9 4.7
Marquette.	734	77	116	29.20	30.01	.00	45.3	+ 0.5	81	8 51	23	27	39	29	40	36	73	1.76	- 1.4	15	8,344	w.	36	w.	28 5 8 18 6.8 4.0
Port Huron.	638	70	120	29.37	30.07	+ .03	45.9	- 3.6	79	9 54	25	29	38	32	41	38	77	1.81	- 0.9	10	8,517	sw.	42	w.	21 11 6 14 8 0.0
Sault Sainte Marie.	614	40	61	29.32	30.03	+ .02	43.2	- 0.2	74	8 50	22	29	37	31	40	37	85	2.07	- 1.2	13	8,865	se.	36	w.	26 3 7 21 7.9 1.0
Chicago.	823	140	310	29.19	30.08	+ .04	50.6	- 2.6	73	9 57	29	13	44	45	40	40	71	2.20	- 1.4	5	10,003	w.	46	w.	12 9 12 10 5.2 T.
Milwaukee.	691	132	139	29.33	30.08	+ .05	47.8	- 2.0	73	7 54	28	28	41	26	44	42	87	0.61	- 1.8	7	8,499	w.	32	sc.	20 15 9 7 4.3 0.2
Green Bay.	617	49	88	29.35	30.02	.00	45.8	- 1.3	80	8 54	26	28	38	31	40	36	75	0.95	- 1.4	6	8,292	w.	44	w.	12 10 15 6.8 2.3
Duluth.	1,133	11	47	28.78	30.01	+ .01	42.5	- 2.7	73	6 49	18	28	36	28	38	35	81	2.15	- 0.6	9	9,448	ne.	58	nw.	12 7 9 15 6.5 2.0
<i>North Dakota.</i>							42.9	+ 0.4								75	0.70	- 0.6							6.8
Moorehead.	940	8	57	29.01	30.04	+ .04	44.4	+ 1.6	89	6 54	17	28	35	34	39	36	83	1.61	- 0.5	6	7,522	nw.	32	sw.	7 12 7 12 5.6 0.6
Bismarck.	1,674	57	57	28.27	30.09	+ .10	44.0	- 0.1	88	6 50	8	13	32	41	37	32	74	0.78	- 0.2	3	8,052	nw.	35	n.	24 12 11 8 5.1 1.6
Devils Lake.	1,432	11	44	28.42	30.02	+ .03	41.5	+ 1.0	87	6 52	9	27	31	34	35	30	73	0.21	- 1.0	7	8,443	nw.	36	nn.	11 9 8 14 5.9 1.2
Williston.	1,872	14	58	28.02	30.04	+ .08	41.8	- 1.1	86	4 55	6	13	28	48	35	30	72	2.51	+ 0.1	7	6,860	nw.	44	w.	25 6 17 8 5.3 1.2
<i>Upper Miss. Valley.</i>							50.8	- 2.0								71	2.05	- 0.5	8	9,783	se.	51	nw.	11 13 5 13 5.5 T.	
Minneapolis.	918	102	208	29.10	30.02	+ .01	47.0	- 1.1	82	7 54	24	28	39	29	41	37	71	2.60	+ 0.3	7	8,574	se.	50	nw.	11 11 9 14 6 5.6 0.6
St. Paul.	837	171	179	29.25	30.03	+ .01	47.0	- 2.9	79	7 56	18	28	38	30	39	36	73	1.30	- 1.2	7	3,971	s.	20	nn.	11 11 6 14 5.5 1.1
La Crosse.	714	11	48	29.25	30.08	+ .01	46.8	- 2.0	77	8 55	24	28	39	30	40	36	73	0.91	- 1.5	6	7,404	s.	31	w.	21 9 11 11 5.5 0.1
Madison.	974	70	73	29.00	30.07	+ .04	47.0	- 1.2	82	2 57	18	28	37	37	41	38	78	2.48	+ 0.4	8	5,558	nw.	26	nn.	13 8 10 5.3 T.
Charles City.	1,015	10	49	28.97	30.06	+ .04	50.6	- 2.0	82	2 60	23	13	41	29	43	38	71	2.37	- 0.9	7	6,055	w.	34	nn.	11 13 6 13 5.3 T.
Davenport.	606	71	79	29.41	30.07	+ .03	51.4	- 1.1	89	2 62	20	13	41	39	45	40	70	2.89	+ 0.2	7	6,168	se.	33	nn.	11 13 7 10 4.7 0.1
Des Moines.	861	84	101	29.13	30.04	+ .01	48.4	- 3.6	79	12 58	28	28	39	32	42	37	72	2.03	- 0.6	8	4,752	s.	24	nn.	11 14 7 10 4.7 0.1
Dubuque.	698	100	115	29.32	30.08	+ .04	52.4	- 2.1	82	3 63	15	13	42	35	44	39	70	4.48	+ 2.0	16	5,688	sw.	33	nn.	22 14 9 8 4.2 T.
Keokuk.	614	64	78	29.40	30.08	+ .03	52.4	- 2.1	82	3 63	15	13	42	35	44	39	70	4.48	+ 2.0	16	5,688	sw.	33	nn.	11 17 10 4.3 1.1
Cairo.	356	87	93	29.73	30.12	+ 0.05	59.5	+ 0.4	82	3 70	33	13	49	32	50	45	67	0.74	- 1.9	6	6,166	s.	32	nn.	11 17 10 4.3 1.1
Le Salle.	536	56	64	29.52	30.10	+ .06	49.4	- 2.5	82	8 60	24	28	39	36	38	33	73	1.53	- 1.0	7	6,243	w.	36	w.	21 15 7 9 4.5 T.
Pearl.	609	11	45	29.43	30.10	+ .05	49.8	- 2.2	82	8 61	23	13	39	37	42	38	73	3.59	+ 0.1	10	5,912	s.	35	w.	21 15 7 9 4.4 T.
Springfield, Ill.	614	10	91	29.33	30.09	+ .04	51.9	- 2.7	86	3 62	26	13	42	33	44	39	69	2.76	+ 0.2	10	6,793	w.	30	n.	22 14 9 8 4.3 T.
Hannibal.	534	75	109	29.51	30.09	+ .04	53.4	- 2.5	89	3 64	24	13	43	39	40	35	72	4.48	+ 2.8	12	6,768	sw.	33	sw.	8 15 7 9 4.3 T.
St. Louis.	567	208	217	29.47	30.08	+ .02	56.2	- 2.2	82	3 66	12	13	47	30	48	42	66	3.40	+ 1.0	11	7,474	se.	40	nn.	11 17 8 6 3.8 T.
<i>Missouri Valley.</i>							53.4	+ 0.7								64	1.74	- 0.1						4.3	
Columbia, Mo.	784	11	84	29.23	30.06	+ .01	55.6	+ 0.8	90	2 68	25	13	43	39	40	38	64	0.37	- 0.6		4,705	se.	30	w.	11 19 5 7 3.2 T.
Kansas City.	963	161	181	29.00	30.04	.00	57.3	+ 1.5	89	2 67	28	12	47	34	48	42	63	0.97	- 1.2	6	8,390	s.	44	sw.	11 16 7 8 4.0 T.
Springfield, Mo.	1,324	98	104	28.67	30.08	+ .03	59.2	+ 1.9	90	3 71	26	12	48	32	49	42	64	2.29	- 0.4	7	8,071	se.	32	nn.	14 20 4 10 4.1
Iola.	934	11	50	29.01	30.06	+ .02	58.0	+ 1.1	91	1 72	26	12	44	39	40	35	61	1.90	- 0.6	7	5,423	s.	27	sw.	30 17 6 8 3.6 T.
Topeka.	933	85	101				56.6	+ 0.3	91	2 68	27	12	45	35	40	35	61	1.35	- 0.6	5	5,541	s.	35	nn.	30 17 6 8 3.6 T.
Lincoln.	1,189	11	84	28.76	30.04	+ .01	53.9	+ 0.6	91	3 66	14	12	42	39	44	38	64	1.49	- 0.3	7	8,243	s.	42	nn.	11 13 3 15 5.4 T.
Omaha.	1,105	115	121	28.85	30.04	+ .01	53.6	- 0.6	89	2 63	26	13	44	32	46	39	66	1.70	- 0.6	6	6,372	sw.	33	nn.	11 14 6 11 4.6 T.
Valentine.	2,593	47	54	27.32	30.06	+ .05	49.0	+ 0.5	87	1 62	17	13	40	37	43	37	67	1.63	- 0.2	6	8,676	nw.	36	nn.	24 17 7 11 5.1 T.
Sioux City.	1,135	98	164	28.82	30.04	+ .02	50.6	- 0.5	87	1 62	17	13	38	37	40	35	65	0.17	- 0.2	6	8,918	nw.	50	s.	24 17 7 11 5.1 T.
Pierre.	1,572	70	75	28.37	30.05	+ .04	50.7	+ 1.6	93	5 63	17	13	38	45	40	35	65	0.17	- 0.2	6	8,175	nw.	46	nn.	11 12 12 7 4.7 T.
Huron.	1,308	58	67	28.65	30.06	+ .05	48.9	+ 2.2	88	5 58	14	13	36	38	40	35	62	2.50	+ 1.2	5	9,688	sw.	37	n.	11 13 8 10 4.8 T.
Yankton.	1,233	49	57	28.70	30.03	+ .02	50.0	- 0.5	89	5 61	18	13	39	33	40	35									

TABLE I.—*Climatological data for U. S. Weather Bureau stations, October, 1909—Continued.*

Stations.	Elevation of instruments.		Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.						Precipitation, in inches.			Wind.			Maximum velocity.										
	Banometer above sea level, feet.	Thermometers above ground.	Actual, reduced to mean of 24 hours.	Sea level reduced to mean of 24 hrs.	Departure from normal.	Mean max. + 2°	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Total.	Days with .01 or more.	Total movement, miles.	Precipitation direction.	Miles per hour.	Date.							
	Anerometer above ground.	Mean min. + 2°	Mean max.	Departure from normal.	Mean minimum.	Mean minimum.	Mean daily range.	Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Total.	Days with .01 or more.	Total movement, miles.	Precipitation direction.	Miles per hour.	Date.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness during daylight, tenths.	Total snowfall.							
N.P. Coast Reg.—Con.																												
Port Crescent.	250	8	53	29.77	30.06	+.04	46.6	-0.8	63	11.53	31	30	23	58	3.08	-0.4	14	3,578	s.	19	23	2	17	12	6.7			
Seattle.	123	185	224	29.94	30.07	+.02	52.2	+1.4	73	11.58	40	17	46	23	50	2.86	0.0	10	32	s.	19	19	12	18	7.5			
Tacoma.	213	113	120	29.82	30.05	+.01	51.4	+0.8	74	11.58	35	17	44	27	49	3.35	0.0	12	3,661	sw.	26	26	9	3	18	6.9		
Tatoosh Island.	86	7	57	29.92	30.01	.00	51.0	+1.1	69	10.54	43	30	48	19	48	3.87	0.03	19	11,140	ne.	50	10	4	6	21	7.6		
Portland, Oreg.	153	68	106	29.90	30.06	.00	54.6	+1.3	80	11.62	40	17	47	28	51	84	2.01	1.7	10	3,963	nw.	24	28	8	10	13	5.9	
Roseburg.	510	9	57	29.51	30.07	-.01	53.6	+0.8	83	11.64	36	8	43	39	50	47	80	4.07	+1.5	13	1,830	nw.	20	28	9	10	12	6.1
Mid. Pac. Coast Reg.							59.5	-0.1																		5.0		
Eureka.	62	62	80	30.01	30.08	+.02	53.8	+.07	77	9.60	39	24	48	28	50	48	84	3.78	+1.1	12	4,264	se.	30	18	7	8	16	6.4
Mount Tamalpais.	2,375	11	18	27.61	30.08	+.07	57.5		78	13.63	40	29	52	23	51	46	71	2.37	+1.1	9	9,591	nw.	54	29	13	8	10	4.7
Point Reyes Light.	490	7	18	29.52	30.04		56.8		85	9.61	43	26	52	24				0.90		7	11,315	nw.	48	6	11	5	15	6.0
Red Bluff.	332	50	56	29.68	30.03	.00	63.3	-0.6	91	12.74	43	30	52	35	53	44	50	0.82	0.8	7	3,602	nw.	24	8	17	9	5	3.7
Sacramento.	69,106	117	29.96	30.03	+.04	61.6	-0.6	87	12.72	42	30	51	32	54	48	67	1.27	+0.2	5	4,522	se.	24	19	15	13	3	3.5	
San Francisco.	155,200	204	29.90	30.07	+.06	59.4	+1.0	86	9.66	48	26	53	33	54	50	79	1.23	+0.1	7	4,801	w.	29	6	11	12	8	5.2	
San José.	141	110	29.91	30.06		59.3	-1.0	90	10.72	37	29	46	43				0.72	+0.2	5	3,495	nw.	24	28	16	11	4	4.2	
Southeast Farallon.	30	9	17	30.05	30.08		56.0		81	10.59	50	26	53	25				0.56	+0.7	9	8,440	nw.	41	6	9	7	15	6.2
S. Pac. Coast Reg.							64.1	+1.8									66	0.38	0.4							3.1		
Fresno.	330	67	70	29.68	30.04	+.08	64.0	-0.7	91	10.78	40	31	50	36	54	46	60	0.72	0.0	3	2,941	w.	22	28	20	8	3	2.7
Los Angeles.	338,159	191	29.64	30.01	+.08	66.3	+4.0	99	24.77	47	27	56	36	55	48	66	0.28	+0.5	1	4,246	sw.	19	23	15	14	2	3.4	
San Diego.	87	94	102	29.91	30.00	+.05	63.8	+.8	94	24.71	49	31	57	32	56	51	70	0.00	+0.5	0	3,955	nw.	20	22	22	7	2	2.3
San Luis Obispo.	201	47	54	29.84	30.06	+.07	62.4	+.3	97	10.75	40	17	50	59	53	47	68	0.54	+0.8	4	3,455	nw.	20	20	13	12	6	4.3
West Indies.																												
Grand Turk.	11	6	20																									
San Juan.	82	48	90	29.84	29.92	+.02	80.4		92	24.86	70	17	75	73	80	5.60	-0.6	20	6,818	se.	36	ne.	17	15	12	4	4.5	
Panama.																												
Christobal.	17	5	60																									
Culebra.	172	4	30																									
Ancon.	92	6	69																									
Alajuela.																												
Bohio.																												
Gatun.																												

† Below sea level.

TABLE II.—Accumulated amounts of precipitation for each 5 minutes, for storms in which the rate of fall equaled or exceeded 0.25 in any 5 minutes, or 0.80 inch in 1 hour, during October, 1909, at all stations furnished with self-registering gages.

Stations.	Date.	Total duration.		Excessive rate.	Amount before excessive began.	Ended—	Depths of precipitation (in inches) during periods of time indicated.												
		From—	To—				5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.
Abilene, Tex.	18			1.36															0.33
Albany, N. Y.	13			0.26															0.19
Alpens, Mich.	29-30			0.17															0.11
Amarillo, Tex.	17-18	6:10 p. m.	2:00 a. m.	0.92	0:37 p. m.	9:55 p. m.	0.12	0.11	0.23	0.39	0.45								
Anniston, Ga.	14	8:28 p. m.	11:10 p. m.	0.60	9:57 p. m.	10:12 p. m.	0.08	0.09	0.37	0.42									
Asheville, N. C.	10-11	9:50 p. m.	D. N.	1.91	1:51 a. m.	2:41 a. m.	0.24	0.07	0.17	0.50	0.73	0.94	1.05	1.11	1.21	1.40	1.50		
Atlanta, Ga.	20-21			0.63															0.33
Atlantic City, N. J.	15			0.58															0.19
Augusta, Ga.	14-15	7:21 p. m.	D. N.	0.94	11:49 p. m.	11:59 p. m.	0.16	0.26	0.34										
Baker City, Oreg.	6			0.14															0.11
Baltimore, Md.	11			0.70															0.44
Bentonville, Ark.	8			0.79															0.29
Binghamton, N. Y.	11			0.86															0.51
Birmingham, Ala.	20	1:30 p. m.	D. N.	1.11	7:56 p. m.	8:16 p. m.	0.34	0.18	0.39	0.48	0.54								
Bismarck, N. Dak.	7			0.60															*
Boise, Idaho.	21-22			0.48															0.23
Boston, Mass.	31	6:10 p. m.	7:10 p. m.	0.60	6:17 p. m.	6:33 p. m.	0.02	0.20	0.42	0.53	0.56								0.09
Buffalo, N. Y.	12			0.17															0.17
Burlington, Vt.	2			1.12															0.23
Cairo, Ill.	20			0.64															0.21
Canton, N. Y.	21			0.29															0.14
Charles City, Iowa.	9	9:20 a. m.	2:13 p. m.	0.98	1:18 p. m.	1:38 p. m.	0.43	0.21	0.30	0.38	0.47								
Do.	31	6:10 p. m.	7:10 p. m.	0.60	6:17 p. m.	6:33 p. m.	0.02	0.20	0.42	0.53	0.56								
Charleston, S. C.	6		9:15 a. m.	1.22	2:21 a. m.	2:43 a. m.	0.13	0.07	0.22	0.40	0.53	0.59							0.36
Charlotte, N. C.	14			0.63															
Chattanooga, Tenn.	14	5:55 p. m.	7:42 p. m.	0.89	6:43 p. m.	7:17 p. m.	0.09	0.07	0.14	0.32	0.46	0.63	0.72						

TABLE II.—Accumulated amounts of precipitation for each 5 minutes, etc.—Continued.

TABLE II.—Accumulated amounts of precipitation for each 5 minutes, etc.—Continued.

Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive began.	Depths of precipitation (in inches) during periods of time indicated.													
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Sand Key, Fla.	10			0.63																	0.26
Sandusky, Ohio	10			0.34																	0.20
San Francisco, Cal.	2			0.36																	0.33
San Jose, Cal.	2			0.33																	0.15
San Luis Obispo, Cal.	1			0.44																	0.18
Santa Fe, N. Mex.	6			0.72																	*
Sault Sainte Marie, Mich.	14-15			0.34	4:33 p.m.	5:03 p.m.	4:33 p.m.	0.01	0.17	0.30											
Savannah, Ga.	10	4:33 p.m.	5:03 p.m.	0.34	4:33 p.m.	5:03 p.m.	4:33 p.m.	0.01	0.17	0.30											
Soratton, Pa.	11-12	6:10 p.m.	D. N.	1.04	10:22 p.m.	10:34 p.m.	0.39	0.03	0.30	0.35											
Seattle, Wash.	23			1.23																	0.31
Sheridan, Wyo.	7			0.04																	0.03
Shreveport, La.	8-9	6:53 p.m.	D. N.	1.03	9:07 p.m.	9:18 p.m.	0.05	0.32	0.43												
Sioux City, Iowa	22			0.63																	*
Southeast Farallon, Cal.	23			0.17																	0.16
Spokane, Wash.	21			0.17																	0.12
Springfield, Ill.	17			1.59																	0.30
Springfield, Mo.	8-9			1.43																	*
Syracuse, N. Y.	11			0.50																	0.25
Tacoma, Wash.	23			0.70																	0.15
Tampa, Fla.	23			0.13																	0.03
Tatoosh Island, Wash.	8			1.16																	0.51
Taylor, Tex.	18-19	5:30 p.m.	D. N.	2.38	8:56 p.m.	10:00 p.m.	0.41	0.05	0.13	0.31	0.41	0.43	0.56	0.68	0.77	0.89	0.98	1.05	1.24		
Thomasville, Ga.	21			0.59																	0.24
Toledo, Ohio	21			0.26																	0.33
Tonopah, Nev.	2			0.18																	0.09
Topeka, Kans.	31			0.35																	0.35
Valentine, Nebr.	7			0.02																	0.02
Vicksburg, Miss.	9	D. N.	0:40 a.m.	1.82	4:30 p.m.	5:23 a.m.	0.22	0.06	0.19	0.34	0.46	0.52	0.56	0.60	0.64	0.70	0.84	0.99	1.05	1.24	
Walla Walla, Wash.	19			0.63																	0.30
Washington, D. C.	11			0.38																	0.24
Wichita, Kans.	17-18	7:20 p.m.	D. N.	0.87	7:39 p.m.	7:56 p.m.	0.02	0.14	0.36	0.66	0.71										*
Williston, N. Dak.	16-17			0.03																	*
Wilmington, N. C.	24	12:10 a.m.	D. N.	0.69	12:10 a.m.	12:19 a.m.	T.	0.25	0.33												
Winemucca, Nev.	3			0.37																	0.24
Wytheville, Va.	11			2.23																	0.58
Yankton, S. Dak.	8			0.86																	0.34
Yellowstone Park, Wyo.	7			0.11																	*

* Self-register not working.

† Estimated.

‡ No precipitation recorded during month.

TABLE III.—Data furnished by the Canadian Meteorological Service, October, 1909.

Stations.	Pressure.			Temperature.			Precipitation.			Stations.	Pressure.			Temperature.			Precipitation.			
	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean.	Departure from normal.	Mean maximum.	Mean minimum.	Total.	Departure from normal.		Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean.	Departure from normal.	Mean maximum.	Mean minimum.	Total.	Departure from normal.	Actual, reduced to mean of 24 hours.
St. Johns, N. F.	Ina.	Ina.	Ina.	•	•	•	•	Ina.	Ina.	Parry Sound, Ont.	Ina.	Ina.	Ina.	Ina.	Ina.	Ina.	Ina.	Ina.	Ina.	Ina.
Sydney, C. B. I.	29.69	29.83	-0.09	50.0	+ 4.6	55.7	44.3	4.75	+0.80	Port Arthur, Ont.	29.33	30.03	+.02	42.8	•	•	•	•	•	+0.53
Halifax, N. S.	29.82	29.86	-0.10	51.5	+ 5.0	58.6	44.4	6.82	+2.13	Winnipeg, Man.	25.26	29.97	-0.01	40.9	1.0	47.9	34.0	1.49	-1.07	1.4
Grand Manan, N. B.	29.86	29.91	-0.09	50.4	+ 3.5	58.5	44.3	7.45	+1.90	Minnedosa, Man.	29.16	30.01	+0.03	42.5	3.4	52.4	32.7	0.52	-1.18	1.8
Yarmouth, N. S.	29.86	29.93	-0.08	50.3	+ 2.7	56.3	44.2	2.67	-2.03	Qu'Appelle, Assin.	27.70	29.97	.00	39.2	-0.2	49.1	29.3	0.28	-0.82	0.2
Charlottetown, P. E. I.	29.81	29.85	-0.11	50.1	+ 3.6	55.1	45.1	7.33	+2.43	Medicine Hat, Alberta.	27.70	29.99	+.02	45.5	+ 0.7	58.4	32.6	0.13	-0.45	..
Chatham, N. B.	29.83	29.85	-0.11	47.1	+ 4.1	54.4	39.9	6.23	+2.37	Swift Current, Sask.	27.42	30.02	+0.05	40.2	-1.9	50.5	29.9	0.44	-0.44	1.0
Father Point, Que.	29.87	29.89	-0.08	42.6	+ 2.8	48.0	37.3	4.82	+1.92	Calgary, Alberta.	26.40	29.96	+0.01	40.6	+ 0.5	50.7	30.4	0.64	+0.16	4.6
Quebec, Que.	29.61	29.94	-0.08	44.8	+ 2.4	51.0	38.6	2.20	-0.95	Banff, Alberta.	25.37	29.99	+.04	38.9	-0.4	47.4	30.4	0.70	-0.32	3.9
Montreal, Que.	29.76	29.97	-0.04	46.7	+ 1.9	52.2	41.2	6.89	-2.24	Edmonton, Alberta.	27.65	29.97	+0.04	38.4	-1.7	50.9	28.0	0.80	-0.40	1.6
Rockliffe, Ont.	29.37	29.99	-0.02	44.2	+ 1.4	55.1	33.4	1.71	-0.73	Princetown, Sask.	28.38	29.96	-0.01	38.4	+ 1.3	47.3	29.4	0.97	+0.14	2.0
Ottawa, Ont.	29.73	30.06	+0.05	44.8	+ 1.0	52.6	36.9	1.13	-1.42	Battleford, Sask.	28.22	29.98	+0.01	39.2	-0.4	48.7	29.6	0.36	-0.09	0.3
Kingston, Ont.	29.72	30.03	-0.00	46.6	+ 0.4	54.7	38.5	2.11	-0.62	Kamloops, B. C.	28.69	29.97	+0.01	47.7	-0.7	56.2	39.2	0.50	-0.11	..
Toronto, Ont.	29.67	30.05	+0.01	46.2	- 0.4	55.5	36.9	1.18	-1.18	Victoria, B. C.	29.93	29.03	+0.02	50.4	+ 1.2	56.6	44.2	2.31	-0.06	..
White River, Ont.	28.64	29.97	-0.01	39.1	+ 2.0	47.4	30.9	1.38	-0.07	Barkerville, B. C.	35.8	38.8	-3.9	41.7	-2.7	29.9	4.00	+1.30		
Port Stanley, Ont.	29.43	30.09	+0.04	44.9	- 2.9	53.4	36.4	1.35	-1.63	Dawson, Yukon.	28.72	30.09	+0.07	24.0	-0.2	29.9	18.2	0.96	+0.95	6.9
Southampton, Ont.	29.35	45.5	- 0.6	52.5	38.5	2.16	-1.01	Hamilton, Bermuda...	29.93	30.09	+0.07	72.8	-0.2	78.1	67.4	7.66	+0.95	

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